



Unit(1) Large numbers & Operations

Lesson(1) Hundred Thousands

HUNDREDS THOUSANDS	TEN THOUSANDS	THOUSANDS	HUNDREDS	TENS	UNITS
	9	9	9	9	9
					1
1	0	0	0	0	0

EXERCISE (1)

1) Write numbers in digits (p.3):

A) one hundred sixty thousands, seven hundred and forty.....

b) one hundred thousand, three hundred and seventy-five.....

C) seventy thousand, five hundred and ninety-three

2) Complete:

a) $672\ 384 = 384 + \dots$

$= \dots + \dots + \dots + \dots + \dots + \dots$

b) $126\ 459 = 459 + \dots$

$= \dots + \dots + \dots + \dots + \dots + \dots$



3) Read the following numbers, then write them in words (p.4) :

A) 712 365 is read
as.....

b) 105 206 is read
as.....

c) 300 418 is read
as.....

4) Put the suitable sign ($<$, $=$, $>$):

A) 132 045 93 245 b) 20 864 20531

c) 321 587 321 587 d) 85 679 302001

5) Arrange the following numbers in an ascending order, then in a descending order :

A) 654 321, 143 265, 142 365, 645 321

b) 325 604, 302564, 325 046, 325 064

c) 515 115, 151 155, 551 115, 115 515



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6) Answer p.(5):

- Write the greatest 6-digit number.
- Write the greatest different 6-digit number.
- Write the smallest 6-digit number.

This number is read as one million.

Exercise (2):

1) Write the following numbers in digits :

- one million, one hundred and fifty thousands and twenty -seven.....
- Twenty four million, thirty thousands and two hundred five
- Nine hundred thousand and eighty

2) Write the following sum in digits :

- $4691508 = \dots \text{million} + \dots \text{thousand} + \dots$
- $734216858 = \dots \text{million} + \dots \text{thousands} + \dots$
- $168730050 = \dots \text{million} + \dots \text{thousands} + \dots$



Lesson(3) Millions (Billions)

Milliards	Hundred millions	Ten millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Units
	9	9	9	9	9	9	9	9	9
									+1
1	0	0	0	0	0	0	0	0	0

This number is read as Milliard.

The smallest 10- digit number is =1,000,000,000

Exercise (3):

1) Read the following numbers ,then complete:

a) 8719645302milliard,.....million,.....thousand and.....

b) 6539006475milliard,.....million,.....thousand and.....

c) 2163900800milliard,.....million,.....thousand and.....

2) Answer:

a) Find two 10-digit numbers with the difference between them is one milliard.

b) Find two 10-digit numbers with the difference between them is one thousand.



Lesson (4): Operations on Large Numbers:

First: Adding & subtracting Large Numbers:

1) Find the result:

a) $450000 + 542000 = \dots$ c) $1465789 + 5984078 = \dots$

b) $8752013 + 439815 = \dots$ d) $2107305 + 5760119 = \dots$

2) Find the difference in each of the following :

a) $2256912 - 1145810 = \dots$

b) $6444382 - 4317159 = \dots$

c) $9000100 - 8087089 = \dots$

d) $9887000 - 7115306 = \dots$

3) Story problems:

a) If the budget allocated to support drinking water increased in two consecutive years from 270250000 pounds to 750180000 pounds. Find the amount of increase.

b) Hesham has LE.20000, he bought a bedroom suite for LE.8750 and a reception suite for LE.6250. Find the remainder.

c) Find the number that if subtracted from one milliard, the result is 758209312.



Second: Multiplying a whole number by another:

a) Multiplying by a 1- digit Number :

1) Find the product:

A) $375 \times 4 = \dots\dots$ b) $9318 \times 8 = \dots\dots$

C) $9308 \times 5 = \dots\dots$ d) $7354 \times 3 = \dots\dots$

b) Multiplying by a 2-digit Number :

2) Find the product :

A) $5467 \times 12 = \dots\dots\dots$ b) $3785 \times 17 = \dots\dots\dots$

C) $123 \times 15 = \dots\dots\dots$ D) $2784 \times 32 = \dots\dots\dots$

3) Story problems:

a) Nada bought 25 meters of cloth, the price of one meter p.t.475, how much money did Nada pay?

b) Hazem bought 26 books from the book fair of series animal world, if the price of one book is P.T. 725. Find out the money that Hazem paid.



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Third: Dividing a whole Number by Another.

a) Dividing by a 1- digit Number:

1) Find the quotient:

A) $568 \div 2 = \dots\dots$ b) $946 \div 2 = \dots\dots$

c) $655 \div 5 = \dots\dots$ d) $847 \div 7 = \dots\dots$

b) Dividing by a 2-digit Number with remainder:

A) $9327 \div 28 = \dots\dots$

b) $64064 \div 16 = \dots\dots$

c) $70070 \div 35 = \dots\dots$

D) $3423 \div 62 = \dots\dots$

3) Story problem:

a) If 756 pupils in a school are distributed equally among 18 classes, find the number of pupils in each class.

b) Reda bought a T.V. Set by L.E.4420, He paid L.E.500 in cash ,then he paid the he paid the rest in 28 equally installments. Find the value of each installment.



GENERAL EXERCISES ON UNIT(1)

1) Find the result for each of the following:

A) $87562 + 5429 = \dots\dots\dots$ b) $39057 - 14583 = \dots\dots\dots$

C) $3478 \times 9 = \dots\dots\dots$ d) $721014 \div 7 = \dots\dots\dots$

e) $267 \times 18 = \dots\dots\dots$ f) $62550 \div 25 = \dots\dots\dots$

2) Put the suitable sign ($>, =, <$):

A) $3407805 + 92716 \dots\dots\dots 3500521 - 1$

B) $256 \times 4 \dots\dots\dots 256 \times 5$

C) $9600 \div 5 \dots\dots\dots 9600 \div 4$

D) 100 thousand $\dots\dots\dots$ 100 ten thousand

3) Complete each of the following:

a) The smallest 7- digit number is $\dots\dots\dots$

b) The smallest different 6- digit number is $\dots\dots\dots$

c) The greatest 7-digit number is $\dots\dots\dots$

d) The million is the smallest number formed from $\dots\dots\dots$ digits.

e) 350 tens = $\dots\dots\dots$ hundreds.



4) Choose the correct answer:

- a) The million is the smallest number formed from.....digits.
- B) The digit which represents million in the number 46835714 is.....
- C) $50 \times 40 = \dots\dots$ Hundreds.
- D) 280 tens.....28 hundreds.

5) Story problems:

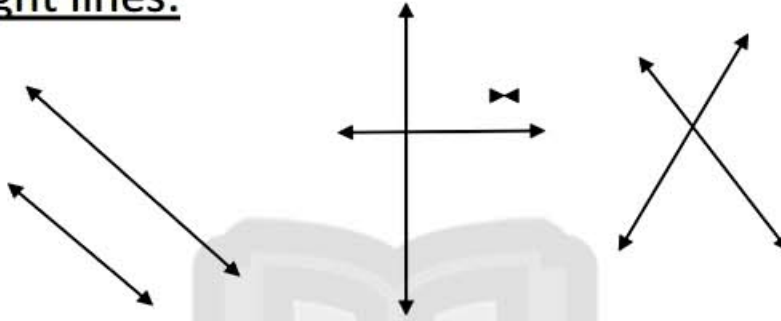
- a) Sally bought 26 meters of cloth for L.E.286; Find the price of 8 meters of the same kind.
- b) In a school if 798 pupils are distributed equally among 19 classes. Find the number of pupils in each class.
- c) Iman bought 24 meters of cloth for L.E.648 find the price of one meter.
- d) Ahmed has L.E.20000, he bought a bedroom suite for L.E.8750 and a reception suite for L.E.6250. find the remainder.
- e) A hotel contains 192 rooms divided equally by a number of floors, each floor contains 16 rooms. How many floors are there in this hotel?



Unit (2) Lesson (1) Relation between two straight Lines and Geometric Constructions.

1) Write the relation between each two straight lines:

a)



2) Notice the opposite figure, then complete:

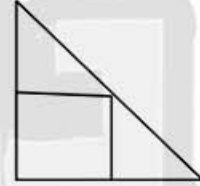
a) $\overleftrightarrow{AB} \dots\dots\dots \overleftrightarrow{BC}$ (\perp , \parallel)

b) $\overleftrightarrow{AB} \dots\dots\dots \overleftrightarrow{YZ}$ (\perp , \parallel)

c) $\overleftrightarrow{XY} \dots\dots\dots \overleftrightarrow{BC}$ (\perp , \parallel)

d) \overleftrightarrow{AY} intersects with \overleftrightarrow{BZ} at the point

e) \overleftrightarrow{YC} intersects with \overleftrightarrow{BX} at the point.....



3) Choose the correct answer :

a) The two parallel straight lines are.....

(perpendicular, intersecting, not intersecting)

b) The two parallel lines intersect at point(s).

(0 , 1 , 2)



c) The two perpendicular straight lines make.....
Right angle(s). (1 ,2 ,3 ,4)

d) Any two straight lines that never intersect are
called.....

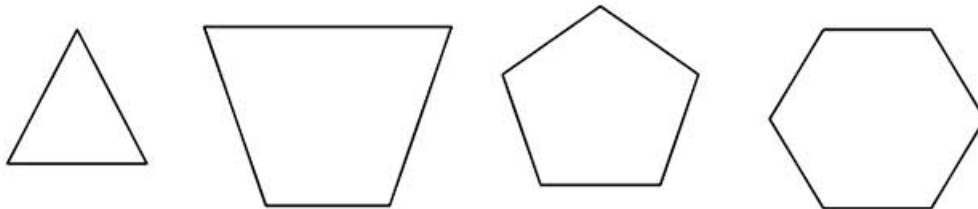
(intersecting , parallel , intersecting & not
perpendicular , perpendicular)

4) Draw the perpendicular \overleftrightarrow{CE} on the given
straight line \overleftrightarrow{AB} , then complete :

$$m(\angle BCE) = m(\angle \dots) = \dots^\circ$$

LESSON(2)POLYGONS

Name of The polygon	Number of sides	Number of vertices	Number of angles	Number of diagonals	
<u>TRIANGLE</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>0</u>	
<u>QUADRILATERAL</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>2</u>	
<u>Pentagon</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	
<u>Hexagon</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>9</u>	
<u>Heptagon</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>14</u>	
<u>Octagon</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	





1) Put (✓) for the correct statement and (x) for the incorrect one and correct the wrong

- a) The angles of a rectangle are right. ()
- b) The sides of the a square are equal in length. ()
- c) The measure of any angle of the square=45°.
- d) Two parallel straight lines are two non-intersecting straight lines.
- e) The two diagonals of the square are perpendicular.()

2) Draw the square ABCD with side length 4cm, then complete :

- a) $AB = \dots = \dots = \dots = \dots \text{Cm.}$
- b) $\overline{AB} \parallel \dots$ and $\overline{BC} \parallel \dots$
- c) $\overline{AB} \perp \dots$, $\overline{CD} \perp \dots$ and $\overline{BD} \perp \dots$

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3) Draw a rectangle XYZL in which its two dimensions are 5cm, and 2cm.



4) Complete the following ,in the quadrilateral:

- Each two opposite sides are parallel in.....,.....,..... and
- Each two opposite sides are equal in length in.....,.....,.....and.....
- The four sides are equal in length.....and.....
- The four angles are right inand.....
- The two diagonals in.....and.....are equal and bisect.....

5) Draw:

- The square ABCD whose side length is 3cm.
- The rectangle ABCD in which $AB=5\text{cm}$.and $BC=4\text{cm}$.
- The rectangle LMNO in which $LM=8\text{cm}$.and $MN=6\text{cm}$.
- The rectangle MNOP where its length 10cm.and its width is half its length.
- Draw a square XYZL with length 6cm. long then join its two diagonals.



LESSON(3) The Triangle

NOTE to study hard:

- 1)The triangle is a polygon of three sides.
- 2)The triangle is a polygon which has no diagonals.
- 3)Any triangle has at least two acute angles and the third angle may be(acute, obtuse, right).
- 4)The sum of measures of the interior angles of any triangle= 180° .
- 5)Types of triangle according to(angles&sides).

Exercises :

1)Complete:

- a) The measure of the right angle= $\dots\dots\dots^{\circ}$
- b) The measure of the straight angle= $\dots\dots^{\circ}$
- c) The sum of interior angles of a triangle= $\dots\dots\dots^{\circ}$
- d) Any triangle has at least.....acute angle(s).
- e) The sum of measures of the two acute angles in the right-angled triangle is..... $^{\circ}$



2) put (✓) or (x):

- a) There can be two right angles in one triangle. ()
- b) There can be three acute angles in one triangle. ()
- c) The measure of the straight angle = the sum of the measure of the angles of a triangle. ()
- d) There can be a right angle and an obtuse angle in one triangle. ()
- e) It is impossible to find a triangle with two obtuse angles. ()
- f) It is impossible to find a triangle with two acute angles. ()
- g) There can be an equilateral triangle with a right angle. ()

3) Draw:

a) Draw $\triangle LMN$ in which $MN=6\text{cm}$, $m(\angle M)=40^\circ$, and $m(\angle N)=70^\circ$, without using the protractor, find $m(\angle L)$.

b) Draw $\triangle ABC$ in which $AC=7\text{cm}$, $m(\angle A)=45^\circ$, and $m(\angle C)=75^\circ$, Calculate, mentally $m(\angle B)$, then check your answer using a protractor.

(b)*What is the type of the triangle according to the measures of its angles?

*What is the type of the triangle according to its side lengths?

C)Draw ΔXYZ in which $XY=5\text{cm}$,
 $m(\angle X)=m(\angle Y)=45^\circ$, find $m(\angle Z)$.

*What is the type of the triangle according to the measures of its angles?

*What is the type of the triangle according to its side lengths?

d)Draw ΔDEF in which $DE=5\text{cm}$, $EF=6\text{cm}$
 and $m(\angle E)=80^\circ$.

*What is the sum of the measures of the two angles $\angle FDE$ and $\angle DFE$?

*What is the type of ΔDEF according to the measures of its angles and its angles and its side lengths?

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Unite (3): Multiples , Factors and Divisibility

LESSON(1) Multiples & LESSON(2) Divisibility

Study well:

- 1) Any number is [divisible by or multiple of 2] if its units is even.
- 2) Any number is [divisible by or multiple of 3] if the sum of its digits is divisible by 3.
- 3) Any number is [divisible by or multiple of 5] if its units is 0 or 5.
- 4) Any number is [divisible by or multiple of 10] if its units is 0.
- 5) Any number is [divisible by or multiple of 2 & 5] if it's divisible by 10.
- 6) Any number is [divisible by or multiple of 2 & 3] if it's divisible by 6.
- 7) Any number is [divisible by or multiple of 3 & 5] if it's divisible by 15.
- 8) Zero is multiple for all numbers.
- 9) The number that is divisible by another , if the remainder of the division operation is zero.



1) Underline each number of the following that is:

- a) Multiply of 3 (4,15,21,10,3)
- b) Multiply of 4 (2,6,8,10,16,52)
- c) Multiply of 5 (16,20,32,36,40,80)
- d) Multiply of 10 (15,50,79,30,40,80)

2) Complete:

- a) The number 12 is a multiple of 3 because.....
- b) The number 32 is a multiple of 4 because.....
- c) All multiples of 2 between 17 and 29.....
- d) All multiples of 3 less than 20.....
- e) All multiples of 2 less than 10.....
- f) All multiples of 3 between 10 and 20.....

3) Complete with (divisible or not divisible):

- a) 48 is.....by 6.
- b) 12 is.....by 5.
- c) 72 is.....by 9.
- d) 111 is.....by 11.
- e) 93 is.....by 3.



LESSON(3) Factors & Prime numbers:

NOTE: The process of writing the number in the form of the product of two or more numbers is called factorization of the number into factors.

1)Complete:

a)The factors of the number 14 are.....

b)The factors of the number 88 are.....

c)The factors of the number 9 are.....

2)Factorize each of the following:

(24,36,12,8).

Study hard:

1)Prime numbers: are the numbers which have only two factors.

2)Prime numbers between 0&100

(2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,51,53,57,59,61,67,71,73,81,83,87,89,91 97)



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3) Put (✓) or (x):

- a) The smallest prime number is 1. ()
- b) The numbers 1, 3, 5 and 11 are all prime numbers. ()
- c) All prime numbers are odd numbers. ()
- d) A prime number is a whole number that has more than two factors. ()

4) Complete:

- a) Is a prime number
- b) The smallest prime number is
- c) The number 37 has ... factors and it is a number.
- d) The smallest odd prime number is
- e) Write all the prime numbers less than 30.

5) Factorize the following to their prime factors :

(12, 18, 24, 27, 36, 44, 56, 112, 132, 312, 105).

LESSON (4) H.C.F. & LESSON (5) L.C.M.

Find : a) The H.C.F. for the number 24 & 36.

b) The H.C.F. for the number 18 & 15.

c) The L.C.M. for the number 7 & 9.



(H.C.F.) & (L.C.M.).....

1) Find the (H.C.F.) & (L.C.M.):

- a) 6 and 12.
- b) 18 and 15.
- c) 30 and 36.
- d) 7 and 14.
- e) 20 and 25.
- f) 33 and 66.
- g) 21 , 24 and 27.
- h) 12, 24 and 48.
- l) 48, 128 and 144.

2)Complete:

- a)The multiples of the number 6 which are between 20 and 40 are.....
- b) The factors of the number 35 are.....

3)Find:

- a) The H.C.F. for the numbers 24 and 36.
- b)The L.C.M. for the numbers 7and 9.



UNIT (4): Measurement (The length & The area).

Lesson (1): The length:

*A kilometer (km.): is used in measuring large length as: the distance between two cities, the long streets and roads.

*A meter (m.): is used in measuring length as: rooms, playgrounds and heights as towers and buildings.

*A centimeter (cm.): is used in measuring small lengths as pens and keys.

*A millimeter (mm.): is used in measuring very small length as small insects.

*Study well:

$Km \rightarrow \times 1000 \rightarrow m \rightarrow \times 10 \rightarrow dm. \rightarrow \times 10 \rightarrow cm \times 10 mm$

1) Complete:

a) 7 km. =m. b) 6 m. =dm.

c)m = 60 dm. =cm.

d) 8 km. =m. =dm.

e) 9 m. =dm. =cm.

f) 350 cm. =m.

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2) Arrange the following units of length in ascending order:

- a) Kilometer , meter millimeter , decimeter.
- b) centimeter , kilometer, meter.
- c) centimeter, decimeter, millimeter ,kilometer, meter.

3)Write the suitable unit of measurement for measuring the following:

- a) The length of a pencil (.....).
- b) The length of my school bus (.....).
- c) The distance between Cairo and Alex. (.....).
- d) The length of an ant (.....).
- e) The height of the class door (.....).
- f) The length of your trousers(.....).
- g) The height of Cairo tower(.....).

4) choose the suitable unit:

- a) The height of lamppost (mm. ,cm. ,m.)
- b) Thickness of an electric wire (mm. ,cm. ,m.)
- c)Length of the classroom(mm. ,cm.,m.)



The perimeter of a square and rectangle

The perimeter of a square = side x 4

The perimeter of a rectangle = (L + W) X 2

1) COMPLETE:

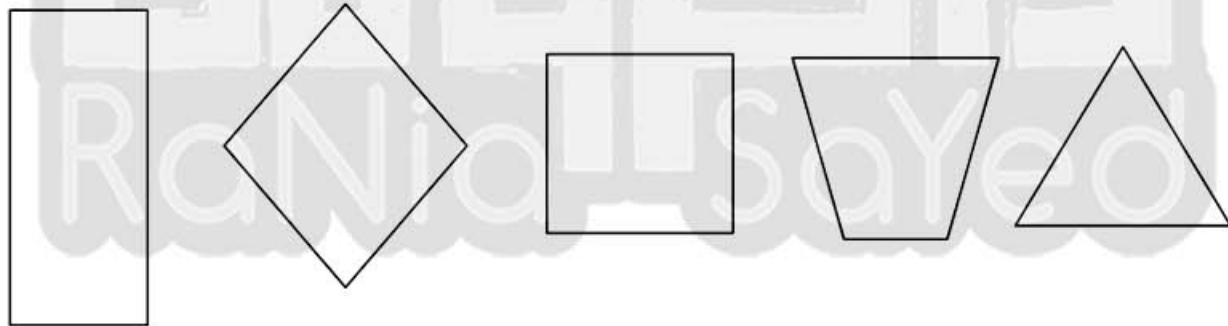
a) The perimeter of a square = x

b) The perimeter of a rectangle =

c) The perimeter of a square with side length 6m is

d) The perimeter of a rectangle with length 6cm. and width 4 cm. is

2) Find the perimeter of the following figures:



3) Put (√) or (x):

a) The perimeter of the square = side length + 4 ()

b) The perimeter of the rectangle = (length + width) 2.

c) The decimeter > the meter. ()



Lesson (2) The area

Area of square = side x side .

Area of rectangle = L x w .

$Km^2 \times 1000000 \rightarrow m^2 \times 100 \rightarrow dm^2 \times 100 \rightarrow cm^2 \times 100$
 mm^2

1) Complete:

- The area of a square = side x.....
- The area of a rectangle = X.....
- The area of the rectangle with dimensions 6 cm. and 3 cm. is.....
- The length of a rectangle = the area \div

2) Complete:

- $5m^2 = \dots\dots\dots cm^2$
- $8dm^2 = \dots\dots\dots cm^2$
- $9km^2 = \dots\dots\dots dm^2$
- $80000cm^2 = \dots\dots m^2$

3) Find the area of each of the following:



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